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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,908

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Gavriel J. Iddan

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EXAMINER

BAPTISTE, KWAME H

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,908

Applicant(s)

IDDAN, GAVRIEL J.

Examiner

Kwame H. Baptiste

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/31/2004 & 08/14/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16 recites the limitation "to direct light" in claim 13. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 19 recites the limitation "image sensor" in claim 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 makes no mention of having light incident on it nor makes any reference to receiving light and also makes no reference to a sensor.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined

under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claim 1,2,3,6,8,9,11,29-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Mullick et al. (US Patent No.7039453)(Mullick'453), which claims priority from provisional application 60/180960 filled on Feb. 8, 2000.

With respect to claim 1,2,3,6,8,9 and 11, Mullick'453 discloses an in-vivo device comprising an imaging sensor (Abstract) and a ballast, which the battery, and active component in the imaging device (Col.8 Ln.35-52), said ballast is capable of orienting said in-vivo device to a known orientation (Col.8 Ln.53-56), wherein the center of gravity of said device is below a longitudinal axis of symmetry of said device or a symmetrical device with a mass added to lower its center of gravity past the center axis (Fig.10 and 11), able to collect light from a wide angle of the in-vivo area as shown by possessing a convex shaped outer window (Fig. 4A (72)), and an outer shell is comprised in the the optical system (Fig. 3A(42,60,62)).

With respect to claims 29-32, method of in-vivo imaging comprising an orienting device with a ballast (Col.8 Ln.53-56), and capturing image of an in-vivo area (Abstract), moving or positioning a body wherein sad device is located by the natural movement of the digestive system (Col.2 Ln.63 –Col.3 Ln.7), and capturing an image of an area surrounding the transverse portion of said device (Fig. 3A).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mullick'453 in view of Alfano et al. (US Patent no. 6240312)(Alfano'312).

Mullick'453 teaches all the elements of the current invention except for expressly disclosing an optical system located on a transverse side of said in-vivo device below said longitudinal axis of symmetry.

In the same field of endeavor, Alfano'312 teaches an in-vivo device which possess two separate optical systems which are neither on the longitudinal axis and can seen to be clearly below the center axis of symmetry (Fig.2-5 (20)).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the disclosure of and the teachings of Alfano'312, in order to simultaneously image and optically treat or examine an in-vivo area, Alfano'312 (Col.1 Ln. 49-52).

8. Claim 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullick'453 in view of Mizumoto (US Patent No.4278077)(Mizumoto'077).

Mullick'453 teaches all the elements of the current invention except for expressly

disclosing an optical system on the axial portion of the device and the orientation is affected by the a magnetic field.

In the same field of endeavor, Mizumoto'077 teaches an optical device with the optical system on the axial side of the device (Fig, 1) and a device which its optical shutters of the camera and its illumination device are both activated by the induction of current by the magnetic field (Col1 Ln.19-30).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the disclosure of Mullick'453 and the teachings of Mizumoto'077, in order to reduce the discomfort to the patient, Mizumoto'077(Col.1 Ln.5-21).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mullick'453 in view of Miyazaki (US patent No.6184923)(Miyazaki'923).

Mullick'453 teaches all the elements of the current invention except for expressly disclosing a magnifying device.

In the same field of endeavor, Miyazaki'923 teaches an additional component to an in-vivo imaging device which can be added in order to magnify the images (Col.5 Ln.1-15).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the disclosure of Mullick'453 and the teachings of Miyazaki'923, in order to provide multiple kinds of image observation of the imaging device, Miyazaki'923 (Col.2 Ln.19-30).

10. Claim 12-28 are rejected under 35 U.S.C.103(a) as being unpatentable over Mullick'453 in view of Lemelson (US Patent No.5993378) (Lemelson'378) and further in view of Miyazaki (US Patent No.6184923) (Miyazaki'923).

With respect to claims 14-17,19-22,24,26 and 28, Mullick'453 teaches all the elements of the current invention including an in-vivo imaging device (Abstract) with an optical device parallel to the horizontal direction or transverse portion of the probe (Fig.4 A-B), the probe has a ballast to orient said device (Col.8 Ln.53-56), optical system is to direct light reflected from a circular field of view (Fig.4 (72)), and to collect light reflected from a first in vivo area in front of said transverse portion of said imaging device (Fig. 4 A-B and 5 A-B), the device comprises a curved or ring shaped mirror (Fig.2 (46)), comprises a transmitter to transmit image data collected by said image sensor (Col.3 Ln. 58 – 67), with a circular transparent opening to the lens the sensor is exposed to a circular or ring shape field of view which images the in-vivo area(Fig. 3A-B), transmitter transferring data using more than one channel (Col.4 Ln. 6-17), where the device is configured to be a swallowed (Col 3 Ln.42-45), where the optical device can be raised from the transverse end of the device to allow it to have a range of 180 degrees (Fig.4 A-B), device possess a ring shaped transparent lens portion of the outer shell (Fig. 3A(62)), capturing image of the in-vivo area transverse to the said axial plan of said device (Fig.4A-B), as the device lens is raised from the

device it has a wide range of view and can produce panoramic view of the in-vivo area(Fig. 4A-B).

Mullick'453 does not disclose a multiple optical system where two optical devices are utilized, an imaging device imaging an area vertical or in front of the axial portion or plan of the device and comprising a magnifying lens.

In the same field of endeavor, with respect to claims 12, 13, 18, and 25

Lemelson'378 teaches in-vivo device such as an optical catheter includes multiple optical capturing window and sensor array as shown in figures 11 and 12 (col. 11, lines 6-22). Although the array is directed at the same direction,

Lemelson'378 also indicates that the sensor arrangement may be positioned to face opposite direction as shown in figures 13 and 15 (col. 11, line 56 - col. 12, line 23), and in reference to to each other the imaging sensors where one would face the transverse or horizontal direction the other would face the vertical or axial direction and hence image the area in axial direction of the device(Fig.13-16). These sensors as disclosed to be a pressure transducers, however,

Lemelson'378 teaches that the device's Sensor head arrangement was modify from the optical imaging head. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the disclosure of Mullick'453 and the teachings of Lemelson'378, in order to sense multiple locations within a body, Lemelson'378 (Col.1 Ln.34-48).

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However, Mullick'453 in view of Lemelson'378 does not disclose, the addition of a magnifying lens. In the same field of endeavor, with respect to claims 23 and 27,

In the same field of endeavor, Miyazaki'923 teaches an additional component to an in-vivo imaging device which can be added in order to magnify the images (Col.5 Ln.1-15).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the disclosure of Mullick'453 and the teachings of Miyazaki'923, in order to provide multiple kinds of image observation of the imaging device, Miyazaki'923 (Col.2 Ln.19-30).

Conclusion

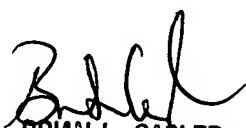
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 6709387(System and method for controlling an in-vivo camera...), 5833603(Implantable Biosensing transponder), 7009634(Device for In-Vivo Imaging).
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwame H. Baptiste whose telephone number is 5712723076. The examiner can normally be reached on Monday - Friday: 8:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 5712724956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KHB


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